

REMARKS

The Applicants sincerely appreciate the thorough examination of the present application as evidenced by the Office Actions of November 6, 2002, and February 14, 2003. In particular, the Applicants appreciate the indication in the Office Action that Claims 6, 7, and 73 would be allowed if rewritten in independent form. In this amendment, the Applicants have amended the specification to overcome all objections relating thereto. The Applicants have also submitted concurrently herewith Declarations showing invention prior to the effective dates of U.S. Patent Publication Nos. US 2003/0000738 and US 2002/0096764. For at least these reasons, the Applicants respectfully submit that all claims are in condition for allowance, and a Notice of Allowance is, thus, respectfully requested in due course.

All Objections To The Specification Have Been Overcome

The Office Action has objected to portions of the specification at lines 13 and 33 of page 9. In response, the Applicants have amended the specification as requested by the Examiner. Accordingly, all objections to the specification have been overcome.

Withdrawal Of All Rejections Based On Rumsey et al. Is Respectfully Requested

Claims 1, 3, 4, 5, 8, 9, 13, 14, 16, 62, 63, 64, 65, 66, and 68 have been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over U.S. Pub. No. 2003/0000738 A1 to Rumsey et al. in view of U.S. Pub. No. 2002/0096764 A1 to Huang. Claims 2, 11, and 67 have been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Rumsey and Huang, and further in view of U.S. App. No. 2002/0182771 A1 to Akram. Claim 10 has been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Rumsey and Huang, and further in view of U.S. App. No. 2001/0011764 A1 to Elenius. Claim 12 has been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Rumsey, Huang, and Akram, and further in view of Elenius. Claim 15 has been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Rumsey and Huang, and further in view of U.S. Pat. No. 6,221,682 to Danziger et al.

Stated in other words, Rumsey is the primary reference in all rejections of Claims 1-5, 8-16, and 62-68. Rumsey, however, has an earliest effective date as a reference of June 25, 2001, and the invention of the rejected subject matter was prior to June 25, 2001, as established in the Declarations Under Rule 1.131 submitted herewith. Accordingly, Rumsey is not effective as a

reference with respect to the claims of the present application, and withdrawal of all rejections of Claims 1-5, 8-16, and 62-68 is respectfully requested. Applicants further submit that removal of Rumsey as an effective reference should not be construed as an admission with respect to any teachings of Rumsey.

Withdrawal Of All Rejections Based On Huang et al. Is Respectfully Requested

Claims 17-20, 24-28, 69-72, and 75-76 have been rejected under 35 U.S.C. Sec. 102(e) as being anticipated by or, in the alternative, under 103(e) as obvious over U.S. Publication No. 2002/0096764 to Huang. Claim 21 has been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Huang in view of U.S. Publication No. 2001/0011764 to Elenius. Claim 22 has been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Huang in view of U.S. Publication No. 2002/0000738 to Akram. Claim 23 has been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Huang and Akram in view of Elenius. Claim 74 has been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Huang in view of Akram.

Stated in other words, Huang is the primary reference in all rejections of Claims 17-28, 69-72, and 74-76. Huang, however, has an earliest effective date as a reference of January 19, 2001, and the invention of the rejected subject matter was prior to January 19, 2001, as established in the Declarations Under Rule 1.131 submitted herewith. Accordingly, Huang is not effective as a reference with respect to the claims of the present application, and withdrawal of all rejections of Claims 17-28, 69-72, and 74-76 is respectfully requested. Applicants further submit that removal of Huang as an effective reference should not be construed as an admission with respect to any teachings of Huang.

In re: J. Daniel Mis
Filed: September 27, 2001
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CONCLUSION

The Applicants sincerely appreciate the Examiner's thorough examination of this application. In response, the Applicants submit that all pending claims in the present application are in condition for allowance for at least the reasons discussed above. A Notice of Allowance is thus respectfully requested in due course. The Examiner is encouraged to contact the undersigned attorney by telephone should any additional issues need to be addressed.

Respectfully submitted,


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Date of Signature: May 14, 2003

Version With Markings To Show Changes Made

In The Specification:

Please amend the paragraph at page 9, lines 7-15, to recite:

Examples of alternate operations of providing wire and solder bonds to a structure according to Figure 1C are illustrated in Figures 3A-B. As shown in Figure 3A, the first integrated circuit substrate **21"** may include input/output pads **23a"-d"** and protective insulating layer **25"** as discussed above. As further discussed above, metallurgy structures **34a"-d"** can provide solder or wire bonds, and may, for example, include respective under bump metallurgy layers **27a"-d"** ~~**29a"-d"**~~, barrier layers **31a"-d"**, and passivation layers **33a"-d"**. These structures can be provided, for example, as discussed above with regard to Figures 1A-C.

Please amend the paragraph at page 9, line 33 to page 10, line 3 to recite:

As further shown in Figure ~~**3B**~~ **3C**, wires **51a"** and **51d"** can be bonded to metallurgy structures **34a"** and **34d"** using techniques known to those having skill in the art. While the wires are discussed as being bonded after solder bonding the second substrate to the first substrate, the wires could be bonded prior to bonding the first and second substrates.